

State of Vermont

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Project Name Here

Project Risk Factors Checklist

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**Instructions:**

Risk’ refers to future conditions or circumstances that exist outside of the control of the project team and will have an adverse impact on the project if they occur. In other words, a risk is a potential future problem that has not yet occurred. A reactive Project Manager resolves problems when they occur. A proactive Project Manager tries to resolve potential problems (risks) before they occur.

There are inherent characteristics of projects that imply high and low levels of risk. For instance, a project that is estimated to take 10,000 effort hours is inherently more risky than one that takes 1,000 effort hours. Likewise, a project utilizing new technology or a new architecture will have a higher degree of risk than one utilizing older and more stable technology.

Section I of this template is used to determine whether there are inherent risks on your project. The results should be used as guidelines, since there will be other factors that may lower or raise the risk level. For instance, you may have a large project, which implies higher risk. This risk could be reduced if you also have an experienced Project Manager. Depending on where your project characteristics fall, you can evaluate whether your risk is high, medium or low. (Medium risks fall in between the extremes.) If your project has many high-risk characteristics, it does not mean you will not be successful. However, it does mean that you should put a plan into place to manage the risk.

This checklist can be especially valuable if your organization customizes the specific risk characteristics and risk criteria that apply to your company. For instance, you may find in your organization a project of less than 5,000 hours is considered low risk, while one that is 20,000 hours or more is high risk.

When you have completed the checklist, look at all of the high-risk items and refer to Section II of this template. In this section, you will see each high-risk factor and examples of problems you may encounter. For each high-risk factor, create a plan to ensure that the risk is mitigated and does not occur. The second column of Section II shows examples of activities that can be added to the risk plan to help mitigate the risk.

After the high-risk factors have been evaluated, look at the medium-level risks to determine if the impact is severe enough that they should have a risk mitigation plan created for them as well. If so, create a risk plan for them too. Then look at any low risk items to see whether they should be listed as assumptions. In this way you recognize that there is a potential for problems, but because the risk is low, you are 'assuming' that the condition will not occur. The activities associated with managing the various risks should then be moved to your project workplan. (Remove this comment section from final document.)

# Section I - Project Risk Factors

|  |  |  |  |
| --- | --- | --- | --- |
| Characteristics | Low Risk | Medium Risk | High Risk |
|  |  |  |  |
| The business benefit of the project is: | ⬜ Well defined | ⬜ | ⬜ Poorly defined |
| The scope of the project is: | ⬜ Well defined | ⬜ | ⬜ Poorly defined |
| The project sponsor is: | ⬜ Identified, committed and enthusiastic | ⬜ | ⬜ Not identified or not enthusiastic |
| The business customer commitment level is: | ⬜ Passionate and enthusiastic | ⬜ | ⬜ Passive and hard to engage |
| The Project Manager has: | ⬜ Similar experience on multiple projects | ⬜ | ⬜ Little experience on similar projects |
| The project team is: | ⬜ Located together | ⬜ | ⬜ Dispersed at multiple sites |
| Project management processes and procedures are: | ⬜ Familiar and will be utilized | ⬜ | ⬜ Not familiar and will not be utilized |
| The business requirements of the project are: | ⬜ Understood and straightforward | ⬜ | ⬜ Very vague or very complex |
| The system availability requirements include: | ⬜ Windows of availability and downtime | ⬜ | ⬜ Available on a 24 X 7 basis |
| The technical requirements are: | ⬜ Similar to others in the company | ⬜ | ⬜ New and complex |
| The data requirements are: | ⬜ Simple | ⬜ | ⬜ Complex |
| The number of locations to deploy to is: | ⬜ One | ⬜ | ⬜ More than four |
| The number of system interfaces are: | ⬜ One or none | ⬜ | ⬜ More than five |
| The number of organizations this will impact is: | ⬜ One or two | ⬜ | ⬜ More than five |
| The total estimated effort hours are: | ⬜ Less than 1,000 hours | ⬜ | ⬜ Greater than 5,000 hours |
| The total estimated project duration is: | ⬜ Less than three months | ⬜ | ⬜ Longer than one year |
| The subject matter is: | ⬜ Well-known by the project team | ⬜ | ⬜ Not well-known by the project team |
| The project is dependent on: | ⬜ Zero or one outside project or team | ⬜ | ⬜ Three or more outside teams or projects |
| Business processes, procedures, policies require: | ⬜ Little or no change | ⬜ | ⬜ Substantial change |
| Changes to the organizational structure require: | ⬜ Little or no change | ⬜ | ⬜ Substantial change |
| The technology being utilized consists of: | ⬜ Existing software, hardware, languages, databases and tools. | ⬜ | ⬜ New software, hardware, languages, databases or tools (or new releases) |
| The quality of current data is: | ⬜ Well defined and simple to convert | ⬜ | ⬜ Poor or complex to convert |
| If a package implementation: | ⬜ No (or minimal) customization is needed  ⬜ The product or release is stable  ⬜ The vendor is familiar in this market | ⬜ | ⬜ Heavy customization is needed  ⬜ The product or release is new to the market  ⬜ The vendor is new to this market |

# Section II - Risk Management Strategy Tables

| High Risk Factors / Potential Problems | Risk Management Activities |  |
| --- | --- | --- |
| **The business benefit of the project – Poorly defined**   * Project is in jeopardy of being placed on-hold or cancelled if higher value work is identified * Hard to get resources required * Hard to evaluate the value of the project to the organization * Hard to define scope changes in terms of cost/benefit * Hard to know if business value was achieved when project is complete | * Try to get business customer to quantify the overall business value of the project * Look at the major requirements and try to quantify the value of the various deliverables * Document the intangible benefit that the project will achieve * Review prior, similar projects to see how the benefits were quantified * Don’t start the project while the business value is undefined |
| The scope of the project – Poorly Defined  * Hard to provide sound estimates * May spend time and cost on areas out of scope * Hard to gather concise requirements * Difficult to write project definition and workplan * Hard to invoke scope change procedures * Project deliverables are poorly defined | * Focus on firming up scope in the planning process * Define various components of scope, such as what organizations are impacted, what deliverables are expected, what type of information is required * Clearly define what is out of scope for the project * Begin to define business requirements at a high level, and then work upward to define scope * Ask project sponsor to make decisions on conflicting scope statements * Document all scope assumptions when providing estimates of work, cost or duration * Use pictures or diagrams to communicate scope and options * Establish firm scope change procedures up front * Ensure the project definition and business requirements are formally approved and signed off * Distribute scope statements to all stakeholders for confirmation * Do not begin project until scope is clear |
| **The project sponsor is – Not identified or not enthusiastic**   * Project may not get the resources it needs * Project may not have the long-term commitment needed * Political battles may delay the project * Issues and change requests may not be resolved in a timely manner | * Establish a strong steering committee to help guide the project * Establish a process for resolving disputes between organizations * Try to identify a different sponsor * Ask the sponsor to delegate full authority to another person who can act on his/her behalf * Don’t start the project |
| **Customer commitment level is – Passive / hard to engage**   * May point out low confidence in the business value * Harder to get customer time and resources needed * Harder to gather business requirements * Customers may undermine or work against the project | * Create an aggressive Communication Plan to keep customers engaged and communicate the business benefit * Create User Group to surface concerns and build enthusiasm * Ask for customer participation in planning and requirements gathering * Ask for help from the sponsor to generate excitement * Look for opportunities to sell project in fun settings and contexts * Be proactive in gaining commitments for customer resources when you need them * Don’t start the project |
| **Project management experience – light**   * May take longer to define the project and build workplan * May make more mistakes in judgment, causing rework and project delays * More difficulty organizing and managing a complex project * May not be familiar with sound project management practices * May not know when to call for help | * Provide up-front project management training * Designate a more senior person to coach and mentor the project manager * Break the project into smaller pieces that are easier to manage * Put a strong quality assurance process in place to ensure the project is on the right track * Make sure the major deliverables are formally approved * Utilize strong team leaders and team members to bring additional experience to bear |
| **Project team is located in – Dispersed locations**   * Harder to communicate effectively * Less team interaction and cohesion * Harder to build personal relationship with the entire team * Some members may feel isolated and not a part of the team * Technology problems may result in productivity decreasing | * Try to get the team into one location, at least for the length of the project * Create an aggressive Communication Plan to ensure the team communicates effectively * Hold regular meetings where the entire team meets face-to-face * Schedule team-building activities where the entire team meets face-to-face * Have backup methods to communicate if the primary technology fails * Maintain frequent contact by phone with remote team members * Create a central repository that all team members can access to hold the project documentation |
| **Project management processes – Not familiar or will not use**   * Team may have a difficult time understanding how to raise issues, scope changes and risks * Project may get out of control as the internal processes become more complex and harder to manage * Communication will tend to be poorer * Project deliverables might be completed in different formats * Issues may not be addressed in a timely manner, scope changes may be adopted without thought of impact to the project, risks may be ignored and quality may be compromised * Chance that the project may be in trouble before it is recognized | * Provide training to the project manager and project team on sound project management processes and procedures * Assign an experienced project management coach or mentor to the project * Break the project into smaller pieces that can be managed with less rigorous project management * Define and gain approval for a set of project management procedures before the project starts, including issues management, change management, risk management and quality management * Create a solid communication plan to ensure everyone knows what’s going on and can provide feedback * Solicit input on issues, risk, scope change and quality concerns on an ongoing basis |
| **The business requirements of the project are – Vague or complex**   * Difficult to document the requirement properly * Difficult to use tools to document the requirements * Difficult to understand what the expectations of the project are * Chance that the resulting solution will not meet business need * May be a sign of a lack of focus from the customer | * Use joint application design (JAD) session to gather requirements from all stakeholders together * Utilize prototyping and iterative development techniques to assist users in discovering the requirements of the new system. * Get access to the sponsor and senior management people to provide overall guidance * Provide training to the customers on how to think about and express business requirements * Ensure that the final business requirements are approved in writing, and that a change management procedure is enforced after that |
| **The system availability requirements are – 24x7**   * Downtime problems may result in productivity decreases or loss of revenue * Redundancy may be needed, which increases system complexities * Newer advanced technology may be required * More procedures and processes are needed to maintain the system environment | * Allocate more time to analysis, design, testing and overall quality assurance activities * Focus extra time and energy on technology architecture * Focus more time and energy on database design * Use industry best practices for all technology and process components * Provide appropriate training to the team so they understand the 24x7 implications of the project * Determine exactly what portions of the system have a 24x7 requirement * Look for internal or outside experts to validate overall technical design and architecture * Develop solid disaster recovery procedures * Develop a strong partnership with the hardware and software vendors |
| **The technical requirements are – new and complex**   * May be difficult to understand the requirements and the implications of design decisions * May be integration issues between old and new technology * May be difficulties testing the complex technology * The more complex the technology, the greater the risk that problems will occur * Problems with incompatible technologies may not be uncovered until integration or system testing | * Utilize system and technical design documents to clearly lay out how the technology fits together * Define the overall system’s technical architecture and have it approved by knowledgeable people in your company * Send the architecture proposal to outside consultants for further feedback and validation * Create a pilot test or prototype to utilize the new technology in a small way at first * Try to substitute more proven and familiar technology in the architecture * Utilize multiple products from the same vendor to ease integration complexities * Use products that utilize open standards and architectures to reduce the risk of integration problems |
| **The project data requirements are – Complex**   * Hard to understand the implications of how data relates * Hard to know if and when all data elements have been captured * More likely that some data elements will be discovered missing until system construction * Solution may have more limited value if all required data is not present * Solution will take longer to analyze, design, construct and test | * Utilize an automated tool to capture data elements and the relationships * Gain agreement on logical design before databases are built * Gather customer approval for the data models once they are completed * Utilize trained data architects to help collect the data and design what the data structures should look like |
| **The number of locations to deploy to – Many**   * May be different requirements from the different locations * May be different procedures, processes or technology * May be technology problems with tying all the pieces together at each location * Technology infrastructure may be different at different locations | * Gather requirements from all locations you will deploy to * Make sure the sponsor agrees with any customization of process or system based on different locations * Implement at a simple site first to gain experience and modify implementation processes before proceeding with all other sites * Make sure an overall architecture is in place that will flexibly accommodate all locations and any communication that needs to take place * Make sure the technical infrastructure is understood at each location |
| **Number of system interfaces – Many**   * Increased complexity of testing * More reliance on other projects or systems * More chance for incompatibility * Harder to track down problems, errors and bugs | * Reduce the need for interfaces when possible * Reduce the amount of information being passed when possible * Use as flexible a technology for the interface as possible (i.e. XML) * Break the project into smaller sub-projects with fewer interfaces to manage * Work early to set expectations regarding the need for knowledgeable resources from the other systems * Test the interfaces as early in the project as possible * Add extra analysis to ensure the needs of the interfaces are well understood * Include the people that support the interfaces in the official communication and status reporting |
| **Number of organizations that are impacted – High**   * Coordination is more complex * Approvals can be more cumbersome and lengthy * More difficult to reach consensus * More people and groups to involve in planning and requirements * Harder to know the major stakeholders of the various organizations * Implementation is harder and more complex | * Establish a formal approval process * Create a Steering Committee to represent the entire stakeholder community * Keep the sponsor engaged and ready to intervene in the various organizations * Include a representative from each organization in requirements, quality assurance and testing * Include opportunities for people from the various organizations to meet and interact * Work with the team on strict adherence to overall project objectives and priorities * Use consensus-building techniques when at all possible |
| Total estimated effort hours – High  * Implication of a high number of effort hours is that there are many people involved and more complexity * Harder to communicate effectively with the team * Bottlenecks can occur when decisions are needed quickly * More chance of people problems * Increased chance of turnover * More people to train | * Use a project management tool to control resource utilization * Have team members utilize weekly status reports to report on progress against their assigned workplan activities. * Utilize team leaders to manage sub-teams * Organize team-building activities to build cohesion * Schedule status meetings to keep people informed of project status * Utilize structured internal procedures for scope, issue, quality and risk management * Break the project into smaller, shorter sub-projects * Reduce available project work time per person, per day to recognize additional people and team related activities |  |
| Total estimated project duration - Long  * Harder to manage to the schedule * Easier for the team and the customer to drift or lose focus * More chance that project will lose organizational commitment * More chance business requirements will change * More chance of change in software or hardware versions * Difficult to instill sense of urgency at the beginning of project * More chance of team and customer turnover | * Break the project into smaller, shorter sub-projects * Identify clear milestones to check that the project is on schedule * Be diligent using formal change management procedures * Rotate team members into different roles to keep up the interest level * Strive to get ahead of schedule as early as possible. * Instill a sense of urgency from the start of the project * Organize team-building activities to build cohesion and reduce friction * Ensure all major deliverables are formally approved so that change management can be invoked afterward * Make technical design and architecture decisions as flexible as possible to account for potential changes |  |
| **The subject matter is – Not well-known by the project team**   * Longer learning curve for project team members * The project may slip behind in the early portions of the project * No sense for whether business requirements make sense * Possibility that critical features or functions will be missed * Need to initially rely on customer for all subject-matter expertise | * Take as much training as practical, as early on as possible * Bring the key customers onto the project team * Spend extra time understanding and documenting the requirements * Set up approval process for requirements that require multiple subject-matter experts * Use joint application design (JAD) session to gather requirements from all stakeholders together * Utilize more frequent walkthroughs and include the users * Build extra time into the estimates for application analysis and design activities |
| **Dependency on outside projects or teams – Many**   * Delays in the other projects/teams could delay your project * Changes to deliverable from other projects/teams could force your project to make changes * More complexity involved in requirements, design, testing, etc. * More chance of incompatible standards, processes, technology * More people and groups to communicate effectively with * Harder to build consensus, longer time for decisions that impact multiple groups | * Be very specific in defining how other projects/teams impact your project * Be very specific on the timing for when deliverables are needed from other projects/teams * Establish central contacts as the focal points of communication between the projects/teams * Include the dependent projects/teams in your status reports and meetings * Continually communicate expectations from the other projects/teams |
| **Business processes and policies require – Substantial change**   * Policy changes could delay the project * People will be confused by new processes, which will affect their ability to utilize the solution * Possibility that new processes will not be fully integrated at first * Possible void if new processes don’t fully cover all contingencies * System functions may not be used if not supported by correct procedures * Substantial change in processes may result in destructive behavior | * Document all current policies and processes and ensure that they are correct * Communicate precisely how the new processes differ from the old ones * Communicate potential changes as far in advance as possible * Ensure the customers are defining the process and policy changes * Have one person responsible for all process and policy changes * Create an aggressive Communication Plan to keep customers engaged and informed * Use the new processes in a pilot test or prototype first to ensure they are workable and correct * Include the successful implementation of new policies and processes as part of the performance criteria for managers * Be open to customer input on process changes to allow them to feel they have impact |
| **Changes to organization structure – Substantial**   * Organizational uncertainty can cause fear in the organization * People may not focus on the project if they have organizational concerns * People may fear loss of jobs in a new organization * People may not use the system if they are unhappy with the organizational change * Uncertainty may cause decisions to be delayed * Organizational change may result in decisions made for political purposes | * Document the concerns that come out of a new organization, and look for ways to mitigate the concerns. * Communicate early and often about the potential for change and the business reasons for it * Involve representatives from all stakeholder areas in the organizational design and options * Get Human Resources involved to deal with potential people issues |
| **The project technology is – New and unfamiliar (or new releases)**   * Learning curve may result in lower initial productivity * May be integration problems between old and new technology * Resistance to technology changes may cause the project to be delayed * May be difficulties testing the new technology * Technology may not be installed or configured correctly, which will lead to project delays * New tools can lead to longer delivery times * New technology may require substantial conversion efforts * System performance may be poor while expertise is gained in optimizing and configuring the technology | * Provide as much training on the new technology as practical, as early as possible * Train everyone who needs to install, use or support the new technology * Make arrangements to rely on vendor technical specialists, when needed * Use outside consultants who are familiar with the technology * Make sure there is an adequate test environment where the technology can be utilized without impacting production * Ensure that solid analysis is completed regarding the new technology functions, features and capabilities * Create procedures and standards for how the new technology should be utilized * Create a pilot test or prototype to utilize the new technology in a small way at first |
| **The quality of current data is – Poor and difficult to convert**   * More work to convert the old data to the new system * Scrubbed data may still cause problems in the new system * Data conversion problems can cause significant project delays | * Make sure that all the old data elements are correctly mapped to the new system * Test the conversion process rigorously before proceeding with final conversion * Determine if the cost and trouble associated with the converted data is worth the value. Ask whether the new system can start with new data only * Keep the old system around for some period to access the old data * Spend the effort to manually clean up the old data as much as possible before conversion |
| **Package implementation – Heavy customization**   * Customization brings added complexity to the project * Making modifications may result in something else breaking * Customization can lead to poor performance * Customization can complicate migrating to newer releases * Heavy customization may mean that the wrong package was selected * Package will probably take longer to implement * Customization will require more reliance on the vendor | * Consider other packages * Consider custom development * Cut back on the business requirements so that customizations are not required * Get a firm estimate of the cost and duration of the modifications from the vendor, and build into your overall workplan * Manage the vendor relationship to ensure all needed work is completed on schedule * Make sure the sponsor has approved the customizations being proposed * Thoroughly test the modified package for functionality and performance * Maintain a vendor log to track issues and milestones |
| **Package implementation – New product or release**   * Greater chance of problems surfacing * More reliance on the vendor to ensure problems are corrected quickly * Installation, testing and deployment will take longer * Hard to know up-front whether the package meets all the business requirements | * Schedule training on the package as early in the project as possible * Add an internal resource or a consultant with prior product experience onto the project. * Schedule a pilot test or a prototype to gain familiarity with the package before full implementation * Establish agreements with the vendor stipulating support level and problem resolution times * See if the project can be delayed until other companies have utilized the product * Seek out other companies that have used the product for their feedback and key learnings |
| **Package implementation – New vendor**   * Possibility that vendor may not survive and leave you with no support * Upgrades may be in jeopardy if there are not enough sales in the marketplace * No prior relationships from which to build a quick partnership * Legal and financial concerns may delay contracts and the project | * Make sure that all agreements with the vendor be in writing * Insist that source code be placed in escrow in case the company does not survive * Ask the vendor to be a part of the project team * Maintain a vendor log to track problems with the package * Make sure the vendor is financially sound * Establish agreements with the vendor stipulating support level and problem resolution times |